Quarterly
Technical Project Status Report
1st Quarter - 2007

Integrating NASA Earth Observation Data into National Applications

EarthScope Project Support

Grant Number: NNS06AA88G

Submitted to:
Internal

EarthScope Project Support

Project Overview

As indicated in the grant proposal, the specific activities under this EarthScope Project Support task are directly affected by the evolving needs and requirements of the EarthScope project itself. However, the bulk of the work is expected to fall within the following categories:

- Facility Siting Management
- Management, Access, and Visualization of Lidar and Related Geospatial Data
- Education & Outreach
- Geophysical Community Support

As an overall goal in this follow-on grant, IAGT will continue to apply geospatial technologies to provide a range of tools and products for decision support and general assistance in achieving the scientific objectives of the EarthScope program. NASA Earth Observation data will be utilized in these tools and products to thereby enhance the capabilities developed and improve the quality of information made available.

IAGT continues to work closely with EarthScope project managers and staff to define specific tasks, establish requirements, set priorities, and produce deliverables based on the evolving needs of the EarthScope program.

Current Project Status

Current activities include:

- Continued development of the USArray Access Database.

Recent Accomplishments

For external customers, the following accomplishments apply to this quarter:

- Continued work on redesign of USArray siting database. Recent activities included continued customer meetings and correspondence, continued modifications of design documents, and gathering feedback from a prototype database for USArray TACO review.
- Provided PBO and USArray with GIS software support.
- Provided feedback on USArray Suggest-A-Site web site.
- Finished generating DeLorme topographic maps for USArray sites in Wyoming.
- Traveled to Socorro, NM for on-site support of USArray siting database.
- Began an analysis of land ownership in New Mexico, Colorado, Wyoming and eastern Montana for USArray.
- Maintained PBOMapper WMS services. PBOMapper has been officially released and can be viewed at http://pbowms.unavco.org/shared/scripts/mapping/map.shtml?map=soh

- Updated USArray Google Earth KML file and IAGT siting support website for Febrary 2007. Began work of automating this process.
- Prepared PBO monthly updates for February 2007; MJ Powerpoint, KMZ, status maps and shapefiles. Files are available for download on http://www.iagt.org/earthscope/es-printmaps.asp.
- Continued work on redesign of USArray siting database. Current version is ready for installation at PASSCAL
- Started work on the next version of 'Suggest-A-Site' prototype application for USArray Transportable Array sites based on feedback from AGU. The current version can be found at http://www.iagt.org/earthscope/suggestasite. Authored an article for the upcoming IRIS and EarthScope newsletters announcing Suggest A Site.
- Continued work on new web application to support USArray field siting teams. The focus will be on automatically generating some statistics and maps for potential sites.
- Finished up final versions of the support products for the NSF open house and Escope review at PBO (Feb. 2007). The animations can be downloaded from www.iagt.org/earthscope/es-printmaps.asp. NOTE: IAGT was acknowledged by IRIS as being a major contributor to the efforts at the PBO Review and NSF open house.
- Continued development of the EarthScope Data Provisioning system by contacting Jon McCarthy, who is leading the siting part of the CREST experiment.
- Started investigation to supplementing the PBO SQUID (strainmeter analysis program) with more detailed GIS map data.
- Started work to assist Brian Blackman, the new EScope webmaster, with new graphics for the Escope website redesign.
- Created KML files for various PBO siting efforts.
- Assisted PBO and USArray with GIS software support.
- Began work with Bob Smith at U of Utah to help with KMZ file generation for the Yellowstone Area, as per a request from PBO (Freddie Blume).
- Authored an IAGT poster (Using GIS to support Earthscope Facility Siting) and co-authored an IRIS poster (Site Reconnaissance and Outreach Activities for the Transportable Array) for the upcoming ES National Meeting.
- Created figures for the Earthscope O & M proposal for both PBO and IRIS.
- Jean traveled to IRIS/PASSCAL in Soccoro, NM in February to demonstrate and train users on the functions of the USArray Access Database, and discuss any further requests and/or revisions.
- Fred, Bill and Jean participated in the EarthScope National Meeting in Monterey, CA, March 26-30. Discussed the upcoming USArray siting workshop with John Taber, Perle Dorr and Bob Busby.

For internal customers, the following accomplishments apply to this quarter:

- Coordinated with Denise Elvrum and IAGT staff to continue the USArray siting database redesign.
- Updated the Earthscope project website at IAGT and it is live at www.iagt.org/earthscope/.

- Jean is leading the USArray database redesign effort, does the weekly USArray KML status updating, and the support mapping for PBO and USArray.
- Mike S. is working with ArcGIS animations for visualizing the various EScope deployments.
- Coordinated with IRIS PASSCAL USArray staff on various topics including ArcIMS, general GIS items and database connectivity.
- Assisted in various ArcMap support questions.
- Created a State Land dataset for New Mexico.
- Jean performed a Federal Lands analysis for the new siting workshop sites.
- Continue to maintain, monitor and tweak pbo1 and pbo2 virtual server for the PBOMapper WMS services. SDE data layers for these services now reside in the Earthscope and General SDE databases.
- Coordinated with Denise Elvrum and IAGT staff to continue the USArray siting database redesign.
- Support products for the Feb 2007 PBO review included 3 animations of the Earthscope facility status progression, various soft copy maps and 150 hand outs for a NSF open house (Bill S.).
- Began working with the PBO SQUID (strainmeter analysis program) to add more detailed GIS map data.
- Started work to assist Brian Blackman, the new EScope webmaster, with new graphics for the Escope website redesign
- Conducted a phone call with Brian letting him know that we are here to help with figures and that Bill Schultz is the lead
- Bill worked with Brian to get him the images he requested.
- Created figures for the Earthscope O & M proposal for both PBO and IRIS including a nine map montage showing various EScope facility status progress and a variety of maps for PBO.
- Included creating custom status datasets.
- Billy A. continues to revise the suggest-a-site tool for IRIS. The most current version of the prototype can be found at www.iagt.org/earthscope/suggestasite. Garnered feedback from users at AGU and IRIS HQ users. Version 2 has now been released for feedback from the ES National Meeting in March 2007.
- Members of the project team met with ISTI to discuss how to improve the geographic data layers for the mapping portion of SQUID.

Outstanding Issues

- We will be finalizing the agreement for becoming a GeoPDF reseller. This software is needed for the IRIS Siting Workshop in May. We will be preparing materials and presentations in which GeoPDF will be featured.

Near-term Goals

- Participate and support the IRIS Siting Workshop in Boulder, CO, May 21-24
- Determine how IAGT can further support the ES and extended Geoscience community beyond the IAGT's funding period.